

JUN 08 2007

Application No. 10/517,591
Art Unit:Dkt. 520.44478X00
Page 4**REMARKS**

Reconsideration and allowance of this application, as amended, is respectfully requested.

This Amendment is in response to the Office Action dated February 8, 2007. By the present amendment, claims 1-18 have been canceled, without prejudice to the applicants' right to file either these or related claims in a continuation application. In addition, new claims 19-22 have been added to clarify the invention.

Briefly, the newly submitted claims 19 to 22 can be read on the eighth embodiment shown in Fig. 13 of the application and discussed beginning on page 32 of the Specification. As noted in the last full paragraph on page 32 of the Specification, the eighth embodiment is substantially identical to the first embodiment (of Fig. 1), but differs in terms of the structure of the directional couplers. For example, in the embodiment of Fig. 1, directional couplers 20-1 to 20-4 extend in parallel with a main transmission line 20, with the coupling length of the respective directional couplers increasing as the distance of the directional couplers from the memory controller 1 increases. The eighth embodiment of Fig. 13 shows an exactly opposite arrangement in which the coupling length of the directional couplers 20-1 to 20-4 decreases as the respective distance of the directional couplers 20-1 to 20-4 from the memory controller 1 increases. In addition, in the eighth embodiment defined in Fig. 13, the wiring intervals W1-W4 decrease as the distance of the respective directional couplers 20-1 to 20-4 from the memory controller 1 increases. The respective relationships between the coupling lengths and the wiring intervals for the directional couplers 20-1 to 20-4 is shown, for example, in expressions 14 and 15 on page 33 of the Specification.

Application No. 10/517,591
Art Unit:

Dkt. 520.44478X00
Page 5

The advantages of these relationships shown in Fig. 13 are discussed in the first full paragraph of page 33, extending to page 34. Specifically, as set forth beginning on page 34, line 1 et seq.:

"That is, since the coupling lengths L_i and the wiring intervals W_i are constituted as expressed in expressions (14) and (15), the generated cross-talk signals have the comparable signal amplitude and the comparable signal time width. For that reason, it is possible to suppress an increase in jitters and the delay time jitters of the receivers, which are attributable to the wiring. For that reason, this structure is suitable for data propagation of further ultra-high speed as compared with that in the first embodiment."

Reconsideration and removal of the 35 USC §112, second paragraph and 35 USC §101 rejections set forth in the Office Action is respectfully requested. By the present Amendment, the previous claims 1-18 have been canceled, thereby obviating these rejections. In their place, the new claim 19 can clearly be read on the embodiment shown in Fig. 13 and discussed beginning on page 32 of the Specification, as noted above. Therefore, it is respectfully submitted that there is clear support to enable the claimed structure, and that the structure clearly is operable and has utility. Therefore, removal of these 35 USC §112 and §101 rejections is earnestly solicited.

Reconsideration and allowance of newly presented independent claim 19 and its dependent claims 20 to 22 over the prior art cited in the Office Action, including the primary reference to Williamson (USP 6,111,476) and the secondary reference to Simon (USP 7,126,437) is also respectfully requested. New independent claim 19 and dependent claims 20-22 clearly defines an arrangement such as shown in Fig. 13 with a first wiring (e.g., the wiring 20 in Fig. 13) extending in a first direction from a first semiconductor device (e.g., such as the semiconductor device 1 shown in Fig. 13), with a plurality of directional couplers (e.g., 20-1 to 20-4) extending in the first

Application No. 10/517,591
Art Unit:

Dkt. 520.44478X00
Page 6

direction and each having respective coupling lengths L and wiring W intervals (that is, the distance from the first wiring 20). In particular, new claim 19 defines:

"wherein the coupling lengths of the directional couplers decrease as the respective distance of the directional couplers from the first semiconductor device increases, and wherein the wiring intervals of spacing of the directional couplers from the first wiring decrease as the respective distances of the directional couplers from the first semiconductor device increase."

As such, it is respectfully submitted that claims 19 to 22 clearly defines over the cited prior art to Williamson, whether considered alone or in combination with Simon.

More specifically, the arrangement shown in Williamson is exactly opposite that of the present claimed invention since the coupling length of the directional couplers 32A, 32B, etc. increase as the distance from the semiconductor driver 22 increases. This, of course, is directly contrary to the above-noted claim limitations in which the coupling lengths of the directional couplers in the present invention decrease with increasing distance from the first semiconductor device. Similarly, there is no disclosure in Williamson with regard to the wiring intervals.

As for the reference to Simon, although this reference compensates differences in coupling intensity utilizing differences in wiring intervals, there is no suggestion in Simon for decreasing both the wiring interval and the coupling length as the distance of directional couplers from the bus master increases. Therefore, even if Simon was combined with Williamson, the end result would still be an arrangement in which the coupling length of the directional couplers increases with distance from the first semiconductor device, completely contrary to the present claimed invention. Therefore, reconsideration and allowance of newly presented claim 19 over the cited prior art is earnestly solicited.

Application No. 10/517,591
Art Unit:

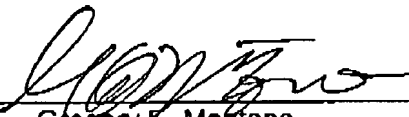
Dkt. 520.44478X00
Page 7

If the Examiner believes that there are any other points which may be clarified or otherwise disposed of either by telephone discussion or by personal interview, the Examiner is invited to contact Applicants' undersigned attorney at the number indicated below.

To the extent necessary, Applicants petition for an extension of time under 37 CFR 1.136. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to the Antonelli, Terry, Stout & Kraus, LLP Deposit Account No. 01-2135 (Docket No. 520.44478X00), and please credit any excess fees to such deposit account.

Respectfully submitted,
ANTONELLI, TERRY, STOUT & KRAUS, LLP

By


Gregory E. Montone
Reg. No. 28,141

GEM/dks

1300 North Seventeenth Street, Suite 1800
Arlington, Virginia 22209
Telephone: (703) 312-6600
Facsimile: (703) 312-6666